

## **ABSTRACT OF THE DISCLOSURE**

A system and method for diagnosing the possibility of disease by making electrical measurements in one of a first body part and a second substantially similar body part are described. The present invention balances out differences between homologous body parts that are due to natural factors unrelated to disease, such as differences in size or symmetry between left and right breasts. Once data are prebalanced, statistical analyses can be performed on the data to diagnose disease. The system includes a normalizing module for obtaining a normalizing factors database from a screening population group to account for differences in spatial separation of impedance measurements. Once a set of normalizing factors is obtained, a prebalancing factor can be obtained that can further be used to adjust raw electrical measurements. Normalizing factors are applied to a smaller subset of measurements that are likely to better represent the body part as a whole. This set of measurements is reduced further by eliminating a set of the measurements that can be biased by a presence of a disease in a body part. The remaining measurements for each body part are then averaged to obtain an overall measure of a body part electrical property. The quotient between these measures is then used to adjust raw measurements. The adjusted measurements remove the imbalance that might exist due to natural differences between body parts. Adjusted measurements are then used as an input to other methods to obtain more accurate disease diagnostics.